Ordering number: EN1858B

SANYO

No.1858B

2SC3792

NPN Epitaxial Planar Silicon Transistor

High h_{FE}, Low-Frequency General-Purpose Amp Applications

Applications

. Low frequency general-purpose amplifiers, drivers, muting circuits

Features

. Adoption of FBET process
. High DC current gain
. High V_{EBO} ($V_{EBO} \geq 25V$)
. High reverse h_{FE} (150 typ.)
. Small ON resistance [Ron=1Ω (I_B=5mA)]

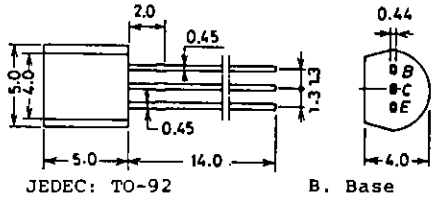
Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V_{CBO}	50	V
Collector to Emitter Voltage	V_{CEO}	20	V
Emitter to Base Voltage	V_{EBO}	25	V
Collector Current	I_C	500	mA
Collector Current(Pulse)	I_{CP}	800	mA
Base Current	I_B	100	mA
Collector Dissipation	P_C	500	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55 to +150	°C

Electrical Characteristics at Ta=25°C

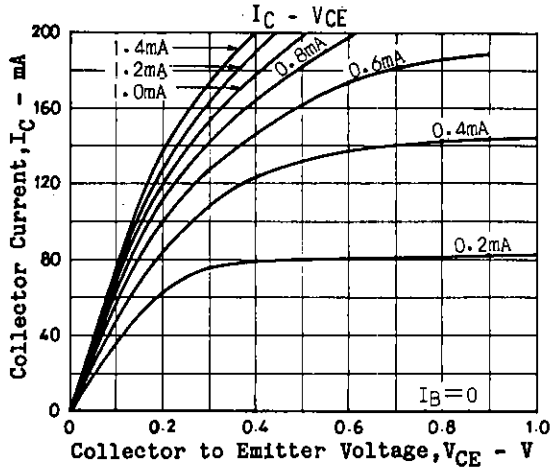
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=40V, I_E=0			0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=20V, I_C=0			0.1	μA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=10mA	300		1200	
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=10mA		250		MHz
Output Capacitance	C_{ob}	V_{CB}=10V, f=1MHz		4.0		pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=100mA, I_B=2mA		0.12	0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=100mA, I_E=2mA		0.85	1.2	V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	50			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	20			V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	25			V

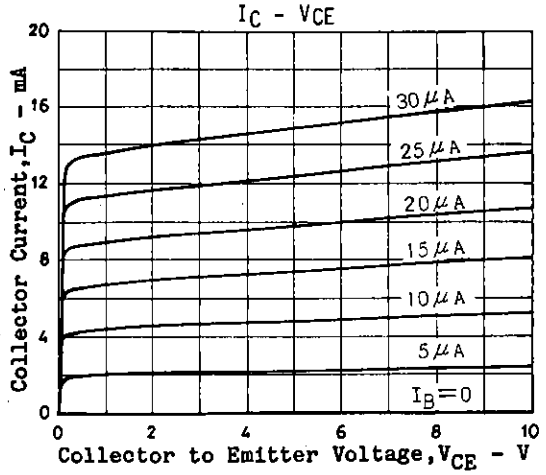
Package Dimensions 2003A
(unit: mm)

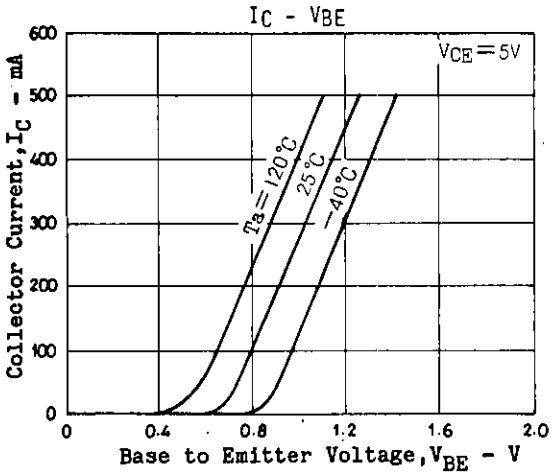


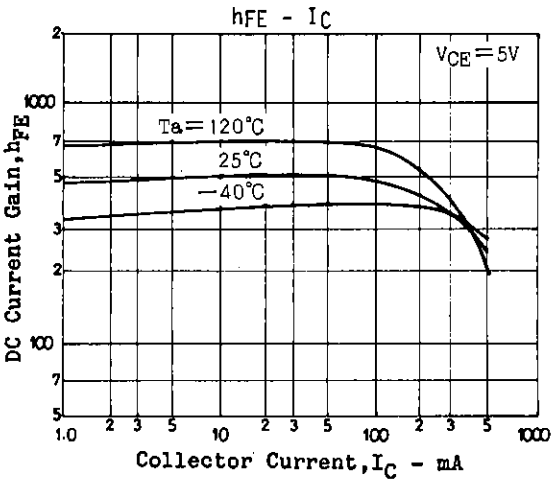
JEDEC: TO-92
EIAJ : SC-43
SANYO: NP

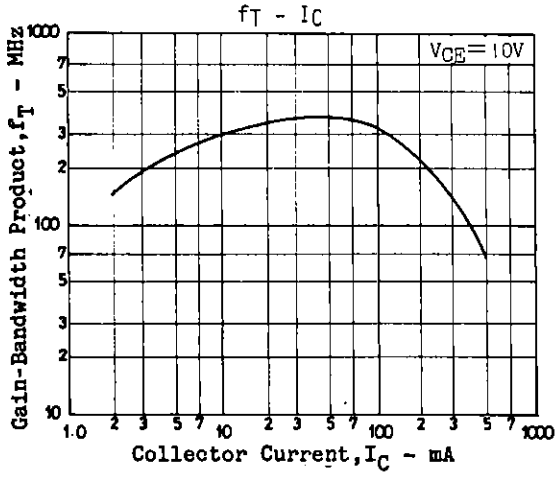
B. Base
C. Collector
E. Emitter

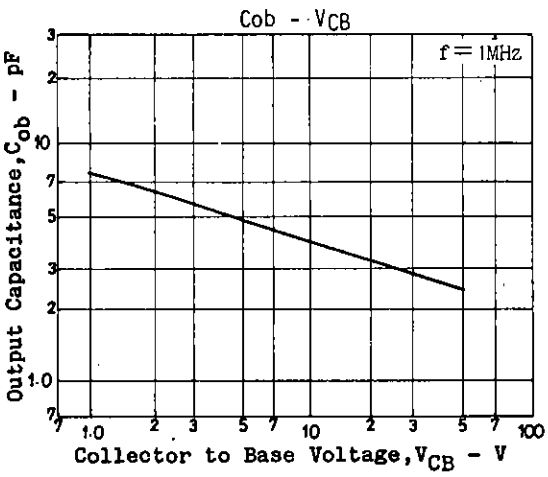

I_C - V_{CE}
1.4mA
1.2mA
1.0mA
0.8mA
0.6mA
0.4mA
0.2mA
I_B=0
Collector Current, I_C - mA
Collector to Emitter Voltage, V_{CE} - V

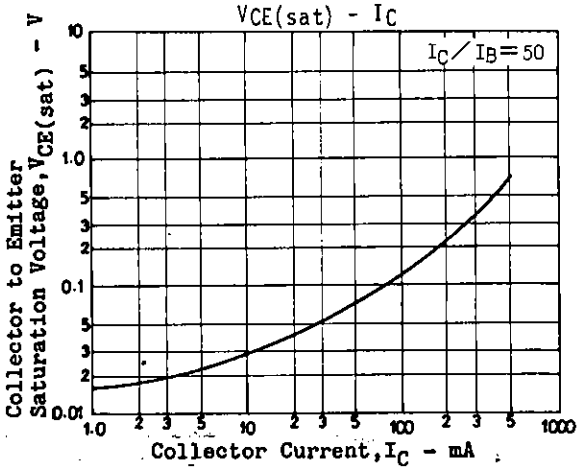

I_C - V_{CE}
30μA
25μA
20μA
15μA
10μA
5μA
I_B=0
Collector Current, I_C - mA
Collector to Emitter Voltage, V_{CE} - V

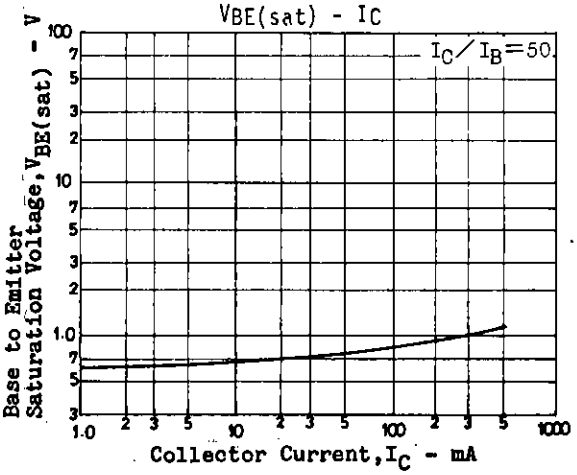

I_C - V_{BE}
V_{CE}=5V
Ta=120°C
25°C
−40°C
Collector Current, I_C - mA
Base to Emitter Voltage, V_{BE} - V


hFE - I_C
V_{CE}=5V
Ta=120°C
25°C
−40°C
DC Current Gain, h_{FE}
Collector Current, I_C - mA


f_T - I_C
V_{CE}=10V
Gain-Bandwidth Product, f_T - MHz
Collector Current, I_C - mA


Cob - V_{CB}
f=1MHz
Output Capacitance, C_{ob} - pF
Collector to Base Voltage, V_{CB} - V


$V_{CE(sat)}$ - I_C
I_C/I_B=50
Collector to Emitter Saturation Voltage, $V_{CE(sat)}$ - V
Collector Current, I_C - mA


$V_{BE(sat)}$ - I_C
I_C/I_B=50
Base to Emitter Saturation Voltage, $V_{BE(sat)}$ - V
Collector Current, I_C - mA